

Product Data Sheet

Product Name: Methyl Parathion

Cat. No.: GC47660

Chemical Properties

Cas. No. 298-00-0

SMILES COP(OC1=CC=C([N+])([O-])=O)C=C1)(OC)=S

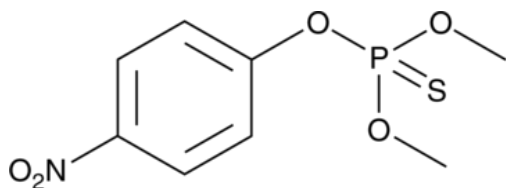
Formula C8H10NO5PS M.Wt 263.2

Solubility Chloroform: Slightly Soluble, Methanol: Slightly Soluble
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Methyl parathion is an organophosphate insecticide.¹ It is converted into an oxon-containing metabolite *in vivo*, similar to other organophosphate pesticides, that inhibits acetylcholinesterase. Methyl parathion is lethal to lab strains and field isolates of tobacco budworm larvae (LD₅₀s = 7 and 81.8-128.3 µg/g, respectively).² It reduces the number of stink bugs (*C. sayi*) caught per 100 net sweeps when applied to alfalfa fields at a concentration of 0.4 pounds per acre.³ Methyl parathion increases sister chromatid exchange (SCE) in a concentration-dependent manner and induces cell cycle arrest at the M₁ phase in V79 cells at a concentration of 40 µg/ml.⁴ It is toxic to rats (LD₅₀ = 14 mg/kg).¹

1. Guo, J.-X., Wu, J.J.-Q., Wight, J.B., et al. Mechanistic insight into acetylcholinesterase inhibition and acute toxicity of organophosphorus compounds: A molecular modeling study. *Chem. Res.*

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Toxicol.19(2)209-216(2006) 2.Martinez-Carrillo, J.L., and Reynolds, H.T.Dosage-mortality studies with pyrethroids and other insecticides on the tobacco budworm (Lepidoptera: Noctuidae) from the Imperial Valley, CaliforniaJ. Econ. Entomol.76(5)983-986(1983) 3.Reynolds, H.T., Stern, V.M., Fukoto, T.R., et al.Potential use of dylox and other insecticides in a control program for field crop pests in CaliforniaJ. Econ. Entomol.53(1)72-78(1960) 4.Chen, H.H., Hsueh, J.L., Sirianni, S.R., et al.Induction of sister-chromatid exchanges and cell cycle delay in cultured mammalian cells treated with eight organophosphorus pesticidesMutat. Res.88(3)307-316(1981)

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA